Quick Start Guide

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HD96-AIR/HD96-AIR-CC-TP/HD96-AIR-CC-IP

Live Digital Console with 144 Input Channels, 123 Mix Buses,
96 kHz Sample Rate and 21" Glare Resistant Touch Screen

MIDAS

EN

HD96-AIR Overview

Chapter 1: Introduction

Welcome to the HD96-AIR Digital Mixing System. The HD96-AIR is a further transformation of the Midas live sound experience, designed for the modern day live sound engineer without compromise.

Based on the flagship HD96-24 the HD96-AIR is the next step in delivering Midas' new way of mixing, while keeping the famous no-compromise sonic quality. New forward-thinking ideas – including large touchscreen control, modern multi-touch gesture control with separate widget-style areas and the Midas mCloud system to help manage many duties of the HD96-AIR system – are just a few of the new concepts created to take mixing audio to a new level.

To obtain the best results please read this quick start guide (QSG) and enjoy the future of mixing with the HD96-AIR System.

About This Guide
This Quick Start Guide (QSG) is designed to quickly familiarize the user with the console layout, show how to configure and set the system up, and then show how to carry out basic functions needed to start mixing audio.

This document is aimed at professional engineers, such as Front Of House (FOH) and Monitor (MON) engineers, who will be using this equipment in a live sound environment. This document assumes that the reader has previous experience of using professional audio equipment.

For full details of the HD96-AIR system please refer to the HD96-AIR Owner's Manual, which can be found on our website at midasconsoles.com. We strongly advise that you read the full manual as many improvements will take place and some of the screenshots in this QSG may be out of date as the software rapidly improves. We are at the inception of this powerful new audio mixing system which will only grow and develop over time.

HD96-AIR System Firmware Version
Our team of software engineers are constantly working to improve and expand the features of the HD96-AIR. To achieve the best results from your console, you should make sure the latest firmware version is installed on your system. Firmware updates can be found in the Midas mCloud (cloud.midasconsoles.com), a new approach to track and store system updates, or via the midasconsoles.com website.

HD96-AIR Touchscreen
WARNING: The HD96-AIR should NOT be placed or operated in direct sunlight. If the screen is exposed to direct sunlight, it may become unresponsive and too hot to handle. Please ensure you have a suitable cover for your console.

Warranty and Registration
Midas are world renowned for quality and reliability. This product comes with a standard 1-year warranty, which can be extended to 3 years by registering your product within 90 days of purchase.

Register your HD96-AIR console by using the Midas mCloud.

Service and Support
The HD96-AIR is state-of-the-art technology. We provide incredible levels of support and service available via the Midas mCloud or by our service team to give owners and users confidence in Midas products.

Commonly Used Terms and Definitions
Below are some of the terms used in this QSG. Knowing these terms and what they mean will make reading this document straight forward.

GUI – Graphic User Interface or Touchscreen.

Channel – Any input or output (Aux, Matrix, Masters).

Path – Any input or output, VCA (Voltage Controlled Amplifier) or Master.

POPulation Group – A group of channels used to bring or recall paths to the touchscreen surface.

Contributions – Any path that contributes to an output bus.

Touch – The action of pressing the touchscreen to turn on or select a function.

Select – The same as Touch.

Pinch – Two fingers squeezed together, used to tighten or widen equalizer width (Q).

Swipe – Moving a page left to right or up and down by pressing, holding and moving in the required direction.

Press-and-Hold – Either a way to select all the paths on a current page for multiple editing, or a way to engage a parameter function that may be critical if pressed in error, for example flatting the EQ is a press-and-hold function.

Widget – The name for a window or various windows displaying information on the GUI as part of a workflow.

Workflow – Visualizes the activities needed to mix audio.

Pot - A physical control used to adjust a level or value, short for 'potentiometer'.

Chapter 2: HD96-AIR Overview

Unpacking the equipment
After carefully unpacking the equipment, save all packing materials, as they will prove useful should it become necessary to transport the equipment later. Inspect the equipment carefully for any sign of damage incurred during transportation. This equipment has undergone stringent quality control inspection and tests prior to packing and was in perfect condition when it left the factory. However, if the equipment shows any signs of damage, notify the transportation company without delay. Only you, the consignee, may institute a claim against the carrier for damage during transportation.

Introducing the HD96-AIR Digital Mixing System
For decades, Midas has been a driving force in the world of pro audio. Building on the incredible success of the XL8 and PRO Series, with their exemplary audio performance and road-proven rugged and reliable construction, the Midas PRO Series became the gold standard in concert touring and installed live sound. Offering the same outstanding sample-synchronised and phase-coherent audio performance, interpolated control functions and intuitive navigation, the PRO2, PRO3, PRO6, PRO9 and later PRO-X Live Audio Systems have become one of the industry's main choices for live sound mixing.

Now building on the success of the HD94-24, Midas is proud to introduce the HD96-AIR. HD96-AIR takes all the same power and processing as the larger HD96-24 and fits it into a small, lightweight and portable package.

Featuring the same 21" touchscreen for hands-on instant access to all controls. Parameter adjustment becomes fast and easy with gesture touch interaction using the precise and accurate multi-touch display which allows up to 10 simultaneous touches. Featuring 144 Simultaneous flexi inputs and 123 (96 x Flexi-Aux + 24 x Matrix + 3 Output busses = 123) time-aligned, phase-coherent busses with no stealing of resources in channel or bus counts. True and consistent 96 kHz sampling frequency and 64-bit floating point processing provide exemplary quality audio processing, and the oversampled and interpolated digital signal processing algorithms, combined with the fully interpolated and touch-sensitive user controls, result in the smooth continuous response and immediacy of working on an analogue console.

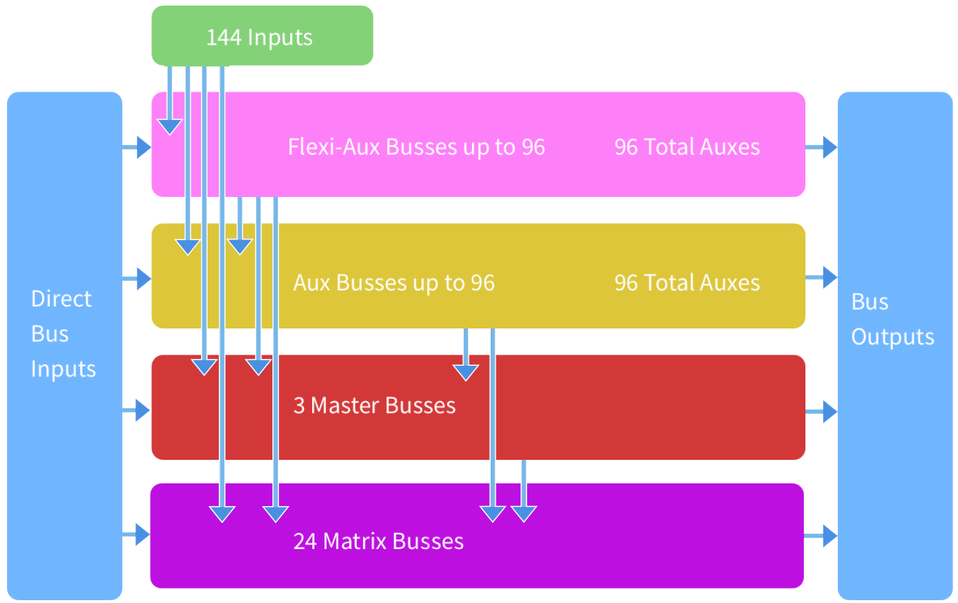
The HD96-AIR features the rugged and road-proven Klark Teknik HyperMAC (HyperMAC) and SuperMAC (AES50 compliant) networking technologies with their ultra-low and deterministic latencies and robust error correction. With this powerful audio networking, HD96-AIR offers up to 617 inputs and 616 outputs at the 96 kHz sample frequency, depending on configuration.

The 24 VCA (Variable Control Association) and 24 POP (POPulation) groups – combined with the advanced touchscreen navigation system, 3 physical faders, assignable controls and an innovative shortcut area – allow simultaneous display and control of all the critical information required to craft an unprecedented mix experience.

Applications
The HD96-AIR takes the fully featured Heritage Digital platform and provides it in a much smaller form factor. If you need a console that fits in a tight space, if you need to fly with your system or if you are using a smaller trailer to truck your equipment, the HD96-AIR might just be the console for you.

Being a truly multi-functional console in the Midas tradition, the HD96-AIR is suitable for many applications, such as:

- Live sound touring FOH or MON duties
- Live sound theatre FOH or MON duties
- Live sound house of worship FOH or MON duties
- Live Performance Broadcast Mixing



System Busses
The HD96-AIR has comprehensive system busses to suit demanding applications, consisting of the following bus options:

- 2 stereo Solo busses, routable from all locations and allowing for dual operator control
- 3 Master busses (1 stereo, 1 mono), routable from the mic/line inputs (up to 144) and 96 Aux busses
- 24 Matrix busses, routable from the mic/line inputs (up to 144), 96 aux busses and 3 Master busses
- 96 Aux busses, either standard or flexi-aux, routable from the mic/line inputs (up to 144) or flexi-aux bus to aux bus for group or stem-style processing

All of the bus routings provide all sources with simultaneous and time-aligned mixing, which will be switchable for minimum latency requirements.

For monitor mixing, the master, matrix and aux busses can all be routed directly from the input channels, with independent level controls providing up to 123 monitor mix busses. Flexi-aux busses allow group mixing of channels to be sent to Auxes, Matrices or the Masters, for example, mix and process all your drums via a Flexi-Aux then send to an IEM Aux.

For traditional FOH sub-group mixing, any (or all) of the aux busses can change to operate post-channel fader and pan (that is, aux gain fixed at unity).

Mix Matrix
Fundamentally, the Mix Matrix defines the capability of the HD96-AIR. Probably the best way to imagine the Mix Matrix is to think of an analogue console layout, where inputs run vertically and busses run horizontally. A Mix Matrix is usually defined as the number of busses and the quantity of simultaneously mixable inputs available per bus. The following diagram illustrates the capability within the HD96-AIR system.

HD96-AIR Overview

Network
The HD96-AIR's network utilises the physical connectivity of Ethernet (RJ45 connectors and Shielded CAT5E/copper cable) but replaces its data protocol with AES50 protocol (implemented as SuperMAC) and the HyperMAC high-capacity system, which are more suited to high-quality, low-latency audio distribution. The use of the AES50 standard allows straightforward interfacing with any third-party hardware that also utilises this connection.

AES50 connections carry digital audio and control data bi-directionally down a single cable. Shielded CAT5E cable is used for the 'local' connections and the dual digital 'snake' (equivalent to a 384-channel analogue multi-core, 192 channels per snake connection) between console and I/O. The combination of audio, control, clock and third-party Ethernet data in a single network means that the hardware interfaces on a single RJ45 connection.

All system connections can be duplicated for full dual redundancy.

mCloud Network
The Midas mCloud network is a brand-new concept in file and system management. The HD96-AIR has built in Wi-Fi capabilities which allow the surface to share its information over a Wi-Fi connection and any other network connections to the mCloud. Be reassured the connection is completely safe and great lengths have been taken to keep information secure.

The mCloud network can be used to store your show files, preset files and all other types of data from the console. If you leave your USB stick with your vital settings at home, you can directly log into your mCloud account and load your show file straight to the HD96-AIR without breaking a sweat.

New system updates can be downloaded directly to the surface ready for you to update when you're ready. A list of all previous software versions will be stored on the HD96-AIR for peace of mind.

The mCloud network also allows audio rental companies to keep track of registrations, software versions, warranties and diagnostic logs. All the admin for running a busy hire company in one place.

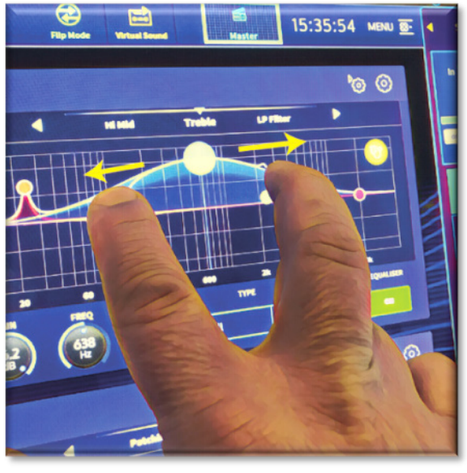
Each user of the HD96-AIR will be prompted to set up a user profile which also in turn configures your mCloud account. Visit cloud.midasconsoles.com to set up and use your account.

HD96-AIR Software
The operating system (OS) of the HD96-AIR is Linux, which is an open-source, stable, proven operating system. Linux is used in many mission-critical applications worldwide and has allowed Midas' software engineers to write a ground-up system that contains no 'hidden' or unused code. This system architecture has resulted in an efficient, compact application, which is quick in operation, quick booting and comparatively easy to debug.

Graphic User Interface (GUI)
The HD96-AIR has a 21" touchscreen that provides a quick and intuitive workflow. Modern touch gestures, such as 'pinch', and smooth touchscreen faders have been included to speed up workflow and let you concentrate on the mix. Not only does the GUI reflect what is happening on the control surface, but it also provides extra functionality via a top menu and a sidebar menu. These menus provide access to all the pages that will be required to set up, configure, manage and operate the entire control surface.

Gone are the days of only one touch on a screen at a time. With this GUI, you can use both hands to manipulate up to 10 faders at a time if you so wish.

Independent widget-style areas are also extensively used in the GUI to display various different types of information at once, all fully customisable to suit your workflow.



Pinch gesture showing EQ width adjustment

System card expansion
The HD96-AIR has dual CM-1 slots built in for further audio expansion, which adds up to an additional 128 channels of I/O that can greatly increase networked capabilities. With these flexible options, virtual sound checks and recording have never been easier to set up and achieve, and this support for new and emerging protocols via these two industry-standard expansion slots gives the HD96-AIR a greatly extended shelf life.

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Chapter 3: Before You Start

Principles of Operation
Control surface operation is based on the concept of colours and groups rather than 'layering' or 'paging', which is the case with most digital consoles on the market today. With so many channels available, it is far easier to remember channels by their user-configured individual/group colour and name, rather than their channel number.

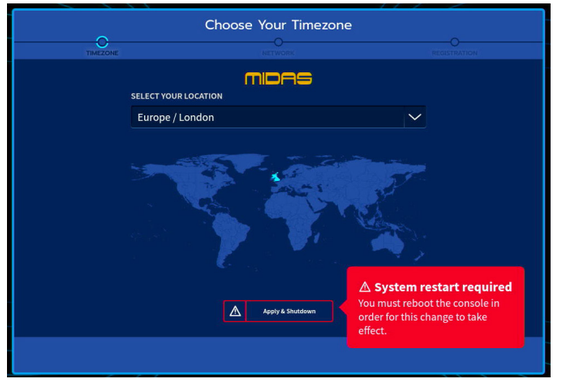
The control surface is populated with the following range of customizable controls, including 8 rotary knobs which can be automatically populated or defined by the user, 24 assignable buttons for quick access to key controls, and 3 fader strips which can be dynamically changed on the fly to bring your important channels to the physical faders

The HD96-AIR surface can also be extended easily with the addition of HD96-FB16 fader bay expansion units.

Hints and Tips
Checking the Console View screen frequently is a good idea. This screen provides at a glance an overview of the control surface's input/output status.

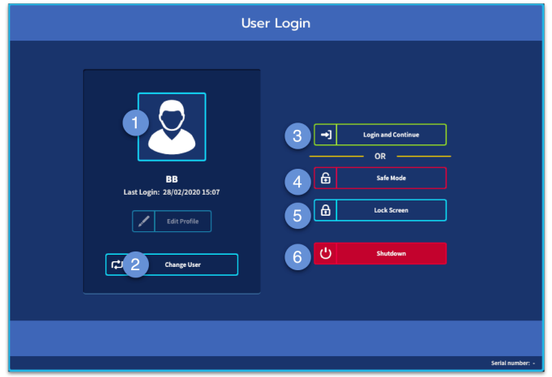
The Manchino (Multi Edit) page is a great place to set various inputs or outputs to user-defined levels or settings (e.g., setting all faders to 0 dB, setting all contributions into a particular aux to be Pre-fade, or routing a large number of paths to the Stereo bus). Details of how this feature works can be found in the full HD96-AIR manual.

User Journey
When the HD96-AIR is switched on for the first time, you will be presented with the welcome screen, then the Country or Region selection page. In order to enjoy the full benefits of the mCloud system, you should connect HD96-AIR to the Internet using a wired or wireless network connection. You will then be guided through the various pages to set up and log in to your mCloud account.



Setting up a User Profile
The HD96-AIR incorporates a system of User Profiles for storing information about the console setup and other User info. Each person using the HD96-AIR system can have their own profile, which keeps all your show files and other useful information, both on the console and via the mCloud network, if the HD96-AIR has an active Internet connection.

After the system has been registered and is turned on for the second time, you will be asked to either log in or create and add a new profile.



The User Login screen will show the following information and options:

1. Current selected profile
2. Change user profile
3. Login to your mCloud account (all active files in your account will be available in Show Manager)
4. Safe Mode (the show database is not available in Safe Mode, but you can still mix).
5. Activates the lock screen
6. SHUTDOWN the console

Saving Your Work
We recommend that you save your work regularly to both the mCloud and a USB stick while carrying out the procedures included in this guide. Not only is this good practice during normal operation, but in this instance, these backups may save you from losing some setups that could prove useful later on.

Saving a show versus storing a scene
It is important to understand the differences between saving a show and storing a scene. Storing a scene saves the current settings of the system to the show file. Scene data is never updated unless you manually store a scene. The show file remains unsaved in RAM. Although the state of the control surface is copied after a change is made, these settings are not stored in a scene. Instead, this data is placed in the control surface's NVRAM (non-volatile random-access memory), which is a type of RAM that doesn't lose its data when the power goes off. If the control surface loses power accidentally, these settings are loaded so that audio parameters are identical, thus avoiding audio level jumps.

Saving a show copies the show file onto the internal SD card of the control surface. This SD card provides you with a 'permanent' copy, provided you shut down the system properly as detailed in the following section. You also have the option of saving your show to your Midas mCloud account. This dual backup gives extra security to your work and allows your show file to be restored to a console even if you have lost your USB stick.

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Shutting down the control centre properly
When switching off the control surface, we recommend that you use the SHUTDOWN option in the GUI menu.

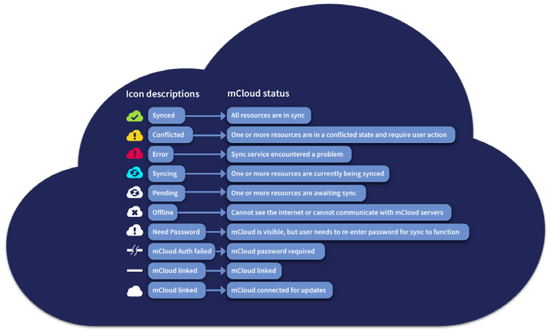
Press-and-hold SHUTDOWN for a short time while the line traces around the outside of the button. The surface will then start the shutdown routine, the screen will go blank, the Midas logo will briefly be displayed, and then the screen will go blank for a second time indicating the shutdown procedure has finished.

Only once the system has been shut down correctly is it safe to turn off the power switch. By using SHUTDOWN, the cached copy of the show data, which is maintained by the system, is automatically stored. SHUTDOWN then uses the current show file, NVRAM data and cache files to restore the control surface to exactly the same state as at power down, even to the point of loading the unsaved show and placing you at the correct scene, with non-stored scene data at the control surface.

If you don't use the SHUTDOWN option the audio parameters are still restored, but the show and show status (saved/unsaved) may not be restored automatically. In the event the show does not automatically reload, you must manually reload the show, and any unsaved changes will be lost.

The Midas mCloud system
mCloud handles all show file storage at its basic level. Imagine leaving your USB stick at home but not worrying, as once you sign into your mCloud account, on the surface you can see all your shows in one convenient place.

Below is a status list to show how your files are synced or not.



Status if connected to the mCloud:

- **Synced** – All versions of this show have been pushed to the mCloud; any newer mCloud versions have been synced to the console
- **Pending** – One or more newer versions have been created on the console and will be synced shortly
- **Syncing** – Edits are being pushed to and/or pulled from the mCloud
- **Conflicted** – Edits have been made on both console and cloud: awaiting user to select the correct current version
- **Error** – The sync service encountered a problem trying to sync this resource (e.g., due to an issue communication with the mCloud)

"Connected to mCloud" means the console can reach the mCloud server, the current user is mCloud-enabled and a valid password has been entered (or a valid token saved from a previous session).

Status if offline:

- **Synced** – Latest version of shows on the console have been synced to the mCloud. Newer mCloud versions will be unknown.
- **Pending** – One or more newer versions have been created on the console and will be scheduled for sync next time the console is connected.
- **Syncing** – n/a
- **Conflicted** – n/a
- **Error** – n/a

Chapter 4: About the Control Surface

The HD96-AIR has been designed with limited but highly flexible surface controls allowing users to define a rapid workflow that works for them while still maintaining a small and lightweight form factor without compromising the mixing capabilities seen in the larger HD96-24.

The aluminium and carbon fibre chassis keeps this product lightweight and strong. Contained within HD96-AIR is the full DSP and Control system powered by dual redundant power supplies and a full audio routing matrix featuring both analogue and digital audio connectivity. Substantial forced air-cooling is provided by 2 large (but slow moving) fans with internal airflow routing to maintain an acceptable internal temperature. The large capacitive touchscreen displays a large quantity of information and can be customised to match your workflow to make mixing a pleasure. Using modern day gestures from mobile phone and tablet technology such as pinch and swipe makes parameter manipulation even faster and more responsive with up to 10 simultaneous touch points.

The HD96-AIR system is designed to be easy to see for colour-blind people, and great care has been taken to accommodate as many types of colour-blind people as possible.

Control surface layout

The HD96-AIR surface can be split into 8 distinct areas making operation quick and precise with all controls close to hand. The areas are defined in the following callout diagram.

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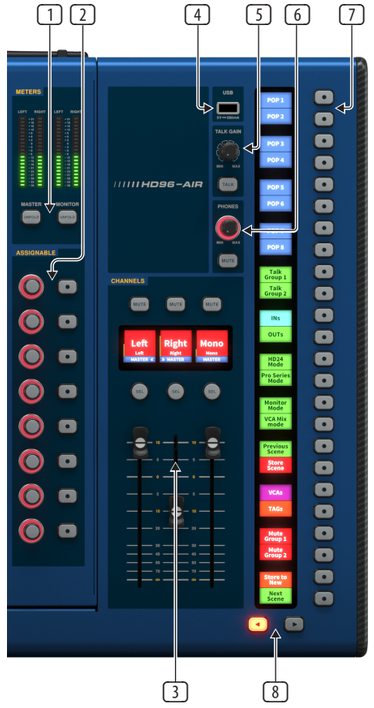
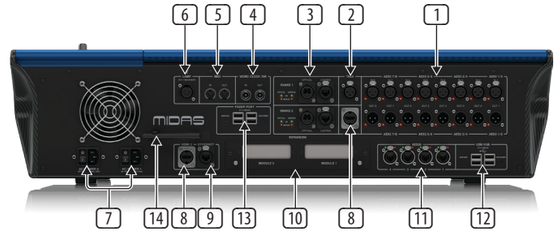


Surface Layout

1. **METERS** – 4 x 20 segment meters for Master and Monitor Bus. Unfold buttons to spill Masters or Monitors to the Channel Fader Bank over the top of the assigned channels.
2. **ASSIGNABLE CONTROLS** – 8 x user-assignable rotary control and button. Fully interpolated analogue pot supported by on-screen sidebar. Users can assign a range of functionality including One-Shot Pot, Auto One-Shot Pot, Customer Rotary Layers and Aux Send Controls.
3. **CHANNEL FADER BANK** – 3 x assignable channel strips which default to Left, Right and Mono. Each channel strip features Mute, LCD display and Select button which can also act as solo (Activate Solo Follows Select) and 100 mm motorized fader.
4. **USB PORT** – USB Type A port for connecting storage devices allowing users to import or export user data.
5. **TALK GAIN** – Controls gain for the dedicated talk input on the rear of the console and TALK button to enable the Talk Bus to route audio to the desired busses/channels. TALK button can operate as latching or momentary.
6. **PHONES** – Headphone Level control and headphone MUTE switch. Headphone output will duplicate audio routed to Monitor/Solo A bus.
7. **GLOBAL ASSIGNABLE SHORTCUTS** – 24 x Assignable buttons supported by 12 LCD display screens. Completely customizable to provide instant access to users desired controls.
8. **GLOBAL ASSIGNABLE SHORTCUT L/R** – Left/Right paging buttons for users assignable button layers.



Rear Panel Connections
The HD96-AIR has a range of connectivity options to satisfy all requirements and provide enough flexibility to handle a range of applications.

1. **LOCAL FIXED I/O** – 8 XLR mic inputs and line outputs which can be freely routed to/from any channel on the desk. Each pair of inputs and outputs can be switched to AES3 where the first connector of the pair becomes a stereo AES3 input or output.
2. **TALK** – Input for connecting a talk mic to the internal talk bus. TALK input gain can be found on the control surface. The TALK input always provides +48 V of phantom power.
3. **SNAKE** – Dual Snake (HyperMAC) ports which can be configured as two independent 192 x 192 channel audio streams or as a dual-redundant 192 x 192 channel stream with automatic fail over. Snake connections can be configured to either Copper or Fibre using industry-standard optical or RJ45 connectors, respectively. Each Snake port has 2 sets of status LEDs which indicate which mode (Optical/Copper) the snake port is using and the health of the link (OK/ERROR).
4. **WORD CLOCK** – Input (IN) and output (OUT) BNC connectors for sending/receiving word clock signal for external synchronization.
5. **MIDI IN/OUT**– 5-pin MIDI DIN connectors for MIDI In/Out allowing the receiving or transmission of MIDI signals to external devices.
6. **LAMP** – 12 V DC 4-pin lamp connector for powering external light.
7. **AC POWER** – Dual-redundant AC inlet connectors with individual power switches per power supply.
8. **HDMI** – Dual HDMI outputs. HDMI 1 provides a duplication of the onboard screen. HDMI 2 provides access to the second screen user interface.
9. **ETHERNET** – RJ45 connector for connecting the console to an external wired network.
10. **MODULE** – Dual CM-1 expansion slots housing supported Klark Teknik/Midas expansion modules, including MADI, DANTE, USB and AES50.
11. **AES50 PORTS** – 4 AES50 (SuperMAC) ports which can be configured as 4 independent 24 x 24 channel audio streams or as 2 pairs of redundant 24 x 24 channel audio streams with automatic failover.
12. **USB HUB** – 4 x USB ports for connecting peripheral storage devices.
13. **FADER PORT** – 4 x USB ports to connect peripheral storage devices or support FB16 fader bay expansion units.
14. **WIRELESS MODULE** – Removable USB WiFi and Bluetooth module with external antenna.

HD96-AIR Overview

Removing the WiFi and Bluetooth Module

1. Unclip the WIRELESS MODULE antenna to access the two screws on either side of the antenna.
2. Remove these screws. The plastic window can now slide off over the antenna.
3. The WIRELESS MODULE can now be removed. The module can be left unfitted, and the console will function normally with WiFi functionality disabled.
4. The certification information of the Wireless Module can be found https://www.lm-technologies.com/product/wifi-802-11ac-bluetooth-5-0-2t2r-usb-combi-adapter-lm842/?template=certification.

WARNING: Refit using Midas-supplied WiFi modules only. Re-use the screws and nylon spacers when refitting. Do NOT over-tighten the screws when refitting.

Chapter 5: System Setup

Racking the I/O
Please take note of the rack requirements as detailed below.

To ensure the correct installation and function of the outboard equipment, any rack has to meet the following general requirements:

Shock mounting (for non-installation environments)
The rack must provide adequate shock protection of the units it houses by incorporating appropriately designed shock protection methods. For example, a foam-suspended rack or a frame suspended on anti-vibration mounts.

Ventilation
The HD96-AIR has air intake vents on each side of the console. Air is drawn in through the console side vents and exits via the fan on the rear of the surface. It is vital that none of these airways are blocked as overheating may occur if airflow is restricted.

The Midas I/O units have been designed such that their internal ventilation airflow is drawn in through the front of the unit and expelled though the rear. To facilitate air circulation, rack design must ensure that cool air can flow freely through the rack in the same direction, that is, in through the front of the rack and out through the rear. Situations where the air flows in a circular direction around and through a Midas I/O unit must be prevented. Midas recommends that racks with fully opening front and rear doors are used.

CAUTION: Never combine units in the same rack that have been designed for a ventilation air flow direction other than that designed for the Midas units. To avoid this conflict, we recommend that any non-Midas units are housed separately.

Rack mount supports
Always secure the rear of the Midas I/O units to the rack via their rear rack mount support brackets. These brackets are fitted to every Midas I/O unit and are recommended for use in touring applications.

Handles on rack case
You must ensure that there are sufficient external handles fitted to the rack casing to enable the rack to be manoeuvred easily and safely, and by the number of personnel suitable for the task. Also, these handles must be fit for purpose.

Clearance at rear of units
Ensure an adequate clearance at the rear of the units to provide sufficient free space to enable the cables to achieve their minimum bend radius.

Securing the cables
We recommend that the cables at the rear of the units be tidied using lacing bars and cable ties. This should provide optimum access to the rear of the units for connecting other cables, switching the units on/off, etc., and also to give maximum visibility of the units' LEDs for determining communication status, link status, condition of audio etc.

Connection instructions
There are currently two ways to connect the system equipment together:

1. HD96-AIR surface to a Klark Teknik DN9680 via Copper (with the correct cable - solid core.) or with a Multi-Mode (MM) fibre optic snake. Then Klark Teknik DN9680 to I/O box (e.g., DL231) via Shielded CAT5E.
2. HD96-AIR surface direct to I/O (e.g., DL231) via Shielded CAT5.

Make sure only STP Shielded CAT5E-rated cables are used!

For cable length, refer to Midas cable specs. Please take into consideration any in-line connections or links reduce the overall cable length.

AES50 Shielded CAT5E STP vs UTP cables
Music Tribe are standardising the use of RJ45 cables used for AES50 connections and state that customers must use Shielded Twisted Pair (STP) cable only with shielded RJ45 plugs and locking shells.

STP cable has the added advantage of a foil or braided shield that guards the cable against electromagnetic interference. A good foil or braided shield and correctly connected shielded plugs and shells also helps protect against Electrostatic Discharge (ESD) that can be the cause of dropouts on AES50 connections.

Occasionally, shielded RJ45 cables will leave the shield disconnected on one end to help with ground loops, even though it has no benefit for AES50 connections. These connections should have continuity of the shield on both ends including the locking shells. This continuous shielding will ensure the best possible protection against strong ESD impacts, such as handling discharges or even lightning strikes in the neighbourhood.

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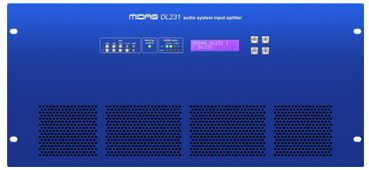
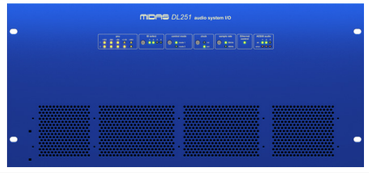
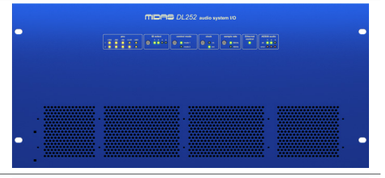
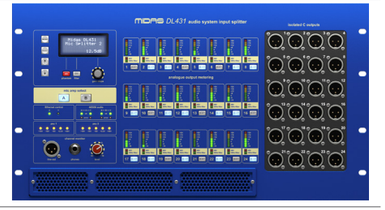
All AES/EBU connections must use good quality 110 Ω AES/EBU cable to ensure correct operation!

System components
Below is a list of currently compatible system I/O components with the HD software. When I/O is connected to the HD96-AIR system, it will be necessary to update to the latest HD I/O software. The updater is built into the console and guides you through the update process. Once updated, I/O boxes will still be compatible with Pro Series consoles.

NOTE: I/O boxes will need to be updated to work with the HD96-AIR system. The I/O Box and Device updater can be found in the Update Manager page. With all your I/O connected, press Sync I/O and follow the instructions. Updated I/O boxes are fully compatible with Pro Series consoles.

After connecting up your system, you may need to set up the ID of the unit(s) in the rack, such as the DL231 I/O or DL15x I/O, as each unit within the same family of units must have its own unique ID number.

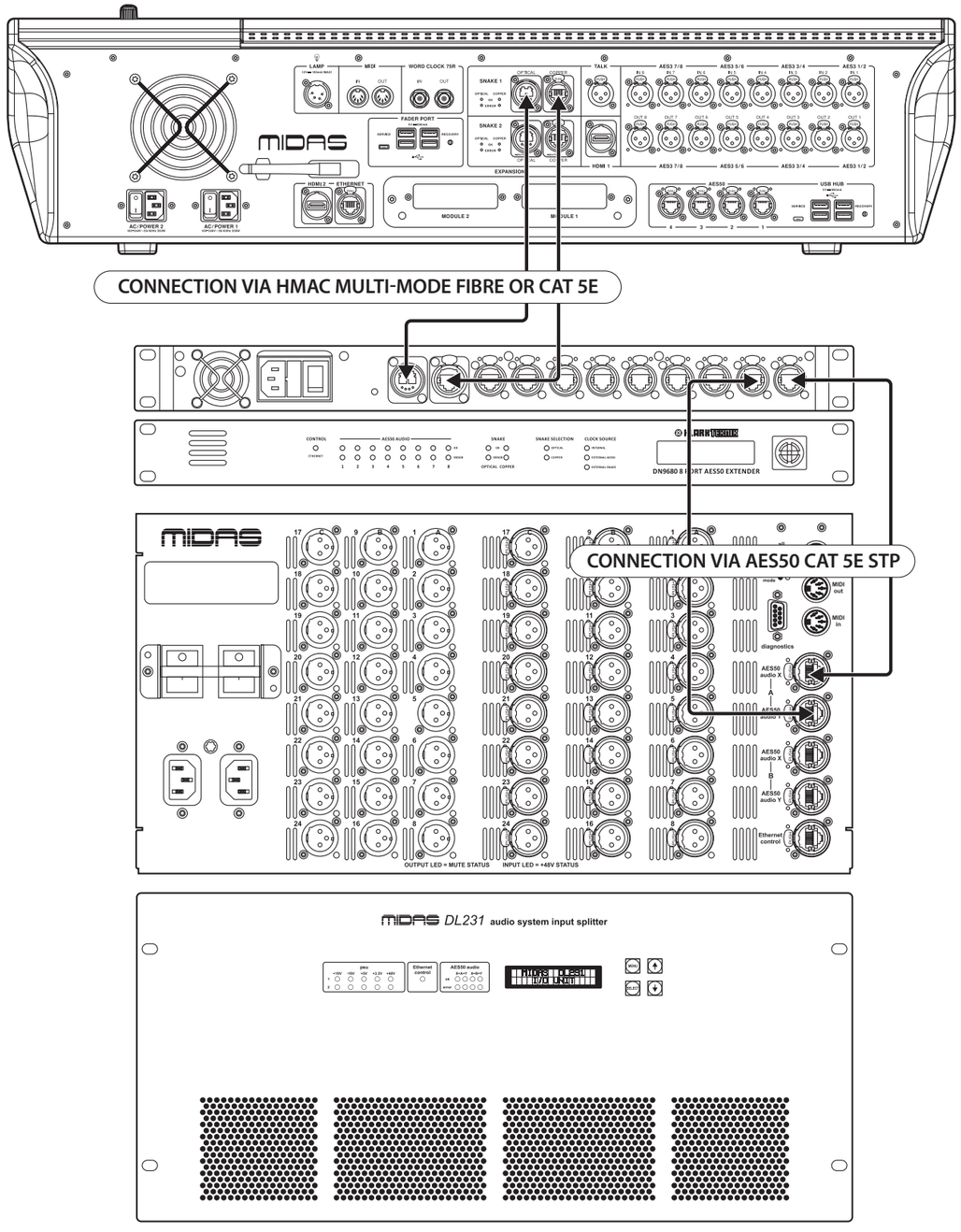
Please refer to the DL series or HD manuals for full details on changing unit ID's.

I/O UNIT	
DL231 - 2 award-winning Midas microphone preamplifiers per input with switchable +48 V phantom power, 2 dual-redundant AES50 network ports with independent phase-locked loop synchronization. 24 electronically balanced output channels can be sourced from microphone preamplifiers or AES50 ports.	
DL151 - 24 award-winning Midas analogue mic preamps with switchable +48 V phantom power.	
DL152 - 24 active-balanced low impedance line-level outputs.	
DL153 - 16 award-winning Midas analogue mic preamps with switchable +48 V phantom power, and 8 active-balanced low-impedance line-level outputs.	
DL154 - 16 active-balanced low-impedance line-level outputs, and 8 award-winning Midas analogue mic preamps with switchable +48 V phantom power.	
DL155 - 8 award-winning Midas analogue mic preamps with switchable +48 V phantom power, 8 active-balanced low-impedance line-level outputs, and 8 AES3 (AES/EBU) digital inputs.	
DL251 - Audio System I/O supplied as a fixed-configuration unit with 48 mic/line inputs and 16 outputs.	
DL252 - Audio System I/O supplied as a fixed-configuration unit with 16 mic/line inputs and 48 outputs.	
DL431 - 24 input, 72 output active microphone splitter with 2 electronically and 1 transformer-balanced outputs per channel, as well as 3 award-winning Midas microphone preamplifiers per channel with switchable +48 V phantom power.	

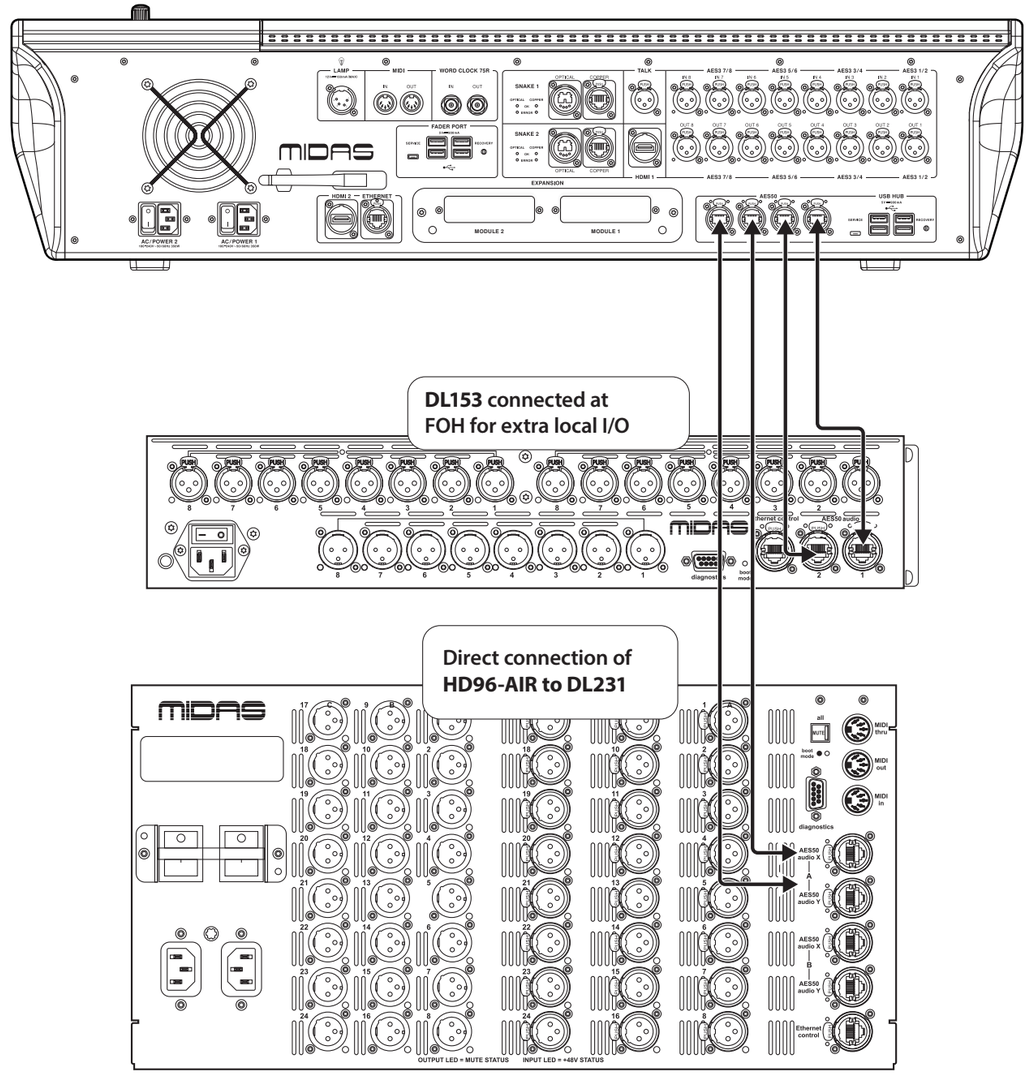
EN

HD96-AIR Overview

Connection Via DN9680



Direct connection of I/O



HD96-AIR Visión General

Red
La red del HD96-AIR utiliza la conectividad física de Ethernet (conectores RJ45 y cable de cobre blindado CAT5E), pero reemplaza su protocolo de datos por el protocolo AES50 (implementado como SuperMAC) y el sistema de alta capacidad HyperMAC, que son más adecuados para la distribución de audio de alta calidad y baja latencia. El uso del estándar AES50 permite la interfaz sencilla con cualquier hardware de terceros que también utilice esta conexión.

Las conexiones AES50 transportan audio digital y datos de control en ambas direcciones por un solo cable. Se utiliza cable blindado CAT5E para las conexiones "locales" y la doble "serpiente" digital (equivalente a un multicanal analógico de 384 canales, 192 canales por conexión de serpiente) entre la consola y el I/O. La combinación de audio, control, reloj y datos Ethernet de terceros en una sola red permite que las interfaces de hardware se conecten a través de una sola conexión RJ45.

Todas las conexiones del sistema pueden duplicarse para una redundancia dual completa.

Red mCloud
La red mCloud de Midas es un concepto completamente nuevo en gestión de archivos y sistemas. El HD96-AIR cuenta con capacidades Wi-Fi integradas que permiten que la superficie comparta su información a través de una conexión Wi-Fi y cualquier otra conexión de red hacia mCloud. Puedes estar tranquilo, la conexión es completamente segura y se han tomado muchas precauciones para mantener la información protegida.

La red mCloud se puede utilizar para almacenar tus archivos de show, archivos de preset y todo tipo de datos desde la consola. Si olvidas tu USB con tus ajustes importantes en casa, puedes iniciar sesión directamente en tu cuenta de mCloud y cargar tu archivo de show directamente al HD96-AIR sin complicaciones.

Las nuevas actualizaciones del sistema pueden descargarse directamente a la superficie y estarán listas para ser instaladas cuando lo decidas. Se almacenará una lista de todas las versiones de software anteriores en el HD96-AIR para tu tranquilidad.

La red mCloud también permite a las compañías de alquiler de audio llevar un seguimiento de registros, versiones de software, garantías y registros de diagnóstico. Toda la administración para gestionar una compañía de alquiler ocupada, en un solo lugar.

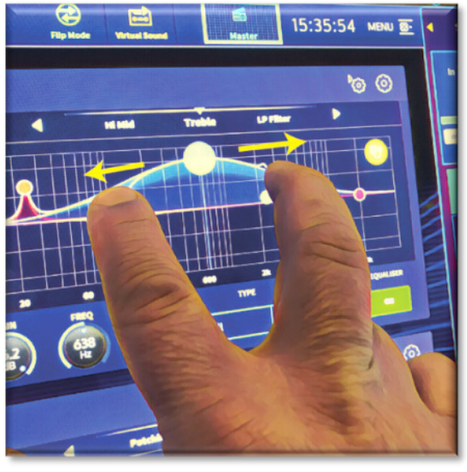
Cada usuario del HD96-AIR será guiado a configurar un perfil de usuario que también configurará tu cuenta mCloud. Visita cloud.midasconsoles.com para configurar y usar tu cuenta.

Software del HD96-AIR
El sistema operativo (OS) del HD96-AIR es Linux, un sistema operativo de código abierto, estable y probado. Linux se utiliza en muchas aplicaciones críticas en todo el mundo y ha permitido a los ingenieros de software de Midas crear un sistema desde cero que no contiene código "oculto" ni sin usar. Esta arquitectura del sistema ha resultado en una aplicación eficiente y compacta, rápida en operación, de arranque veloz y comparativamente fácil de depurar.

Interfaz Gráfica de Usuario (GUI)
El HD96-AIR cuenta con una pantalla táctil de 21" que proporciona un flujo de trabajo rápido e intuitivo. Se han incluido gestos táctiles modernos como "pinch" y faders suaves en pantalla para agilizar el flujo de trabajo y permitirte concentrarte en la mezcla. La GUI no solo refleja lo que ocurre en la superficie de control, sino que también proporciona funcionalidad adicional mediante un menú superior y un menú lateral. Estos menús proporcionan acceso a todas las páginas necesarias para configurar, administrar y operar toda la superficie de control.

Atrás quedaron los días de un solo toque en la pantalla a la vez. Con esta GUI, puedes usar ambas manos para manipular hasta 10 faders a la vez si así lo deseas.

También se utilizan ampliamente áreas independientes tipo widget en la GUI para mostrar diversos tipos de información al mismo tiempo, todas totalmente personalizables para adaptarse a tu flujo de trabajo.



Gesto de "pinch" mostrando el ajuste de ancho de EQ

Expansión de tarjeta del sistema
El HD96-AIR cuenta con dos ranuras CM-1 integradas para una mayor expansión de audio, lo que suma hasta 128 canales adicionales de I/O que pueden aumentar significativamente las capacidades en red. Con estas opciones flexibles, las pruebas de sonido virtuales y la grabación nunca han sido más fáciles de configurar y lograr, y esta compatibilidad con protocolos nuevos y emergentes a través de estas dos ranuras de expansión estándar de la industria le da al HD96-AIR una vida útil considerablemente extendida.

ES

Capítulo 3: Antes de comenzar

Principios de funcionamiento
El funcionamiento de la superficie de control se basa en el concepto de colores y grupos, en lugar de "capas" o "paginación", como ocurre con la mayoría de las consolas digitales disponibles en el mercado hoy en día. Con tantos canales disponibles, es mucho más fácil recordar los canales por su color y nombre configurados por el usuario (ya sea individual o de grupo), en lugar de por su número de canal.

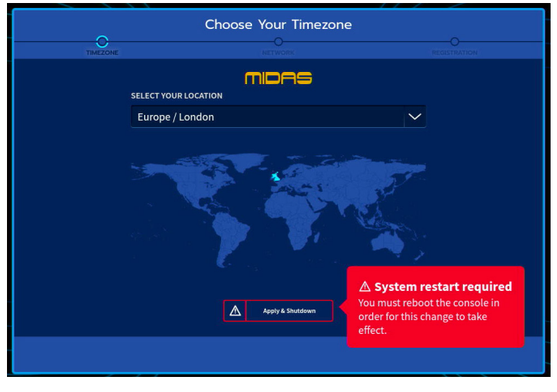
La superficie de control está equipada con la siguiente gama de controles personalizables, incluyendo 8 perillas giratorias que pueden poblarse automáticamente o definirse por el usuario, 24 botones asignables para acceso rápido a controles clave, y 3 tiras de fader que pueden cambiarse dinámicamente al instante para llevar tus canales importantes a los faders físicos.

La superficie del HD96-AIR también puede ampliarse fácilmente con la adición de unidades de expansión de faders HD96-FB16.

Sugerencias y consejos
Revisar con frecuencia la pantalla de Console View es una buena idea. Esta pantalla proporciona, de un vistazo, una visión general del estado de entrada/salida de la superficie de control.

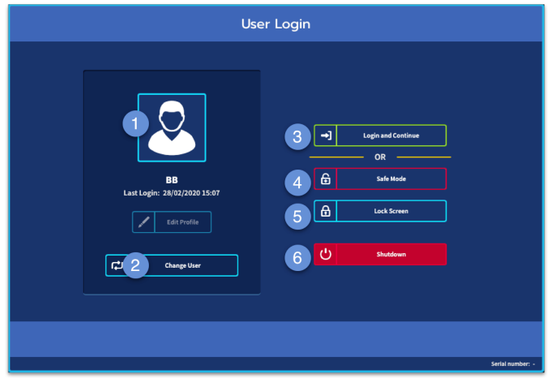
La página Manchino (Multi Edit) es un excelente lugar para establecer diversos niveles o ajustes definidos por el usuario para entradas o salidas (por ejemplo, establecer todos los faders a 0 dB, establecer todas las contribuciones a un aux particular en Pre-fade, o enrutar un gran número de rutas al bus estéreo). Los detalles de cómo funciona esta función se pueden encontrar en el manual completo del HD96-AIR.

Recorrido del usuario
Cuando se enciende el HD96-AIR por primera vez, aparecerá la pantalla de bienvenida, seguida de la página de selección de país o región. Para disfrutar plenamente de los beneficios del sistema mCloud, se debe conectar el HD96-AIR a Internet mediante una conexión de red por cable o inalámbrica. A continuación, se te guiará a través de varias páginas para configurar e iniciar sesión en tu cuenta de mCloud.



Configuración de un perfil de usuario
El HD96-AIR incorpora un sistema de perfiles de usuario para almacenar información sobre la configuración de la consola y otros datos del usuario. Cada persona que utilice el sistema HD96-AIR puede tener su propio perfil, el cual mantiene todos los archivos de show y otra información útil, tanto en la consola como a través de la red mCloud, si el HD96-AIR tiene una conexión activa a Internet.

Después de que el sistema haya sido registrado y se encienda por segunda vez, se te pedirá que inicies sesión o que crees y añadas un nuevo perfil.



La pantalla de inicio de sesión del usuario mostrará la siguiente información y opciones:

1. Perfil seleccionado actualmente
2. Cambiar perfil de usuario
3. Iniciar sesión en tu cuenta de mCloud (todos los archivos activos en tu cuenta estarán disponibles en el Show Manager)
4. Modo seguro (la base de datos de shows no está disponible en Modo seguro, pero aún puedes mezclar)
5. Activar la pantalla de bloqueo
6. SHUTDOWN de la consola

Guardar tu trabajo
Recomendamos guardar tu trabajo con regularidad tanto en mCloud como en una memoria USB mientras realizas los procedimientos incluidos en esta guía. Esto no solo es una buena práctica durante la operación normal, sino que en este caso, estas copias de seguridad pueden evitar que pierdas algunas configuraciones que podrían ser útiles más adelante.

Guardar un show versus almacenar una escena
Es importante comprender las diferencias entre guardar un show y almacenar una escena. Almacenar una escena guarda los ajustes actuales del sistema en el archivo del show. Los datos de escena nunca se actualizan a menos que almacenes manualmente una escena. El archivo del show permanece sin guardar en la RAM. Aunque el estado de la superficie de control se copia después de realizar un cambio, estos ajustes no se almacenan en una escena. En su lugar, estos datos se colocan en la NVRAM (memoria de acceso aleatorio no volátil) de la superficie de control, un tipo de RAM que no pierde sus datos cuando se apaga el equipo. Si la superficie de control pierde energía accidentalmente, estos ajustes se cargan para que los parámetros de audio sean idénticos, evitando así saltos en los niveles de audio.

Guardar un show copia el archivo del show a la tarjeta SD interna de la superficie de control. Esta tarjeta SD te proporciona una copia "permanente", siempre y cuando apagues correctamente el sistema como se detalla en la sección siguiente. También tienes la opción de guardar tu show en tu cuenta mCloud de Midas. Esta copia de seguridad dual ofrece una mayor seguridad a tu trabajo y permite restaurar el archivo del show en una consola incluso si has perdido tu memoria USB.